

Technology Advisory Committee

Subcommittee on Automated and High Frequency Trading

Working Group 3

**Oversight, Surveillance
and Economic Analysis**

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Working Group 3 Topics

- **Tagging Attributes**
- **Assessment of Current Tagging Methodology**
- **Oversight of ATS/HFT**
- **Appropriate ATS/HFT Controls**
- **Registration and Examination of Algorithms**
- **Supervision, Oversight and Analysis**

Tagging Attributes – Identification of ATS Activity

- ICE, CME Group and NFA capture common key attributes

Clearing Firm	Trading Firm	Session ID	Sender Location
Operator ID	ATS Flag	Account	Give-Up Firm

- Currently identified attributes allow SROs to:
 - Distinguish ATS from non-ATS activity
 - Identify individuals operating an ATS
 - Identify owners behind ATS activity
 - Measure trade volume and messaging by firm, account or operator
- Entities are also required to maintain front-end audit trails

Assessment of Current Tagging Methodology

- **SROs capture highly granular order, transaction, timing and reference data that provide the source data necessary to conduct effective surveillance and analysis of ATS and non-ATS activity**
- **Specific ATS strategy-related identifiers will provide little benefit**
 - Significant variability likely to create definitional ambiguity that undermines utility
 - Constant evolution of strategies creates operational churn for questionable benefit
 - Activity in market informs analysis of order and transaction activity
- **If a potential problem is identified, regulatory staff can obtain:**
 - Detailed information regarding the strategy, inputs and design of ATS
 - Information regarding controls employed, testing conducted and supervision protocols
 - Any other information, including related transaction information, deemed necessary

Oversight of ATS/HFT

- Trade practice rules apply regardless of the means or frequency of order entry, and monitoring for market abuse occurs across all types of traders
- Effective controls and supervision are necessary for all electronic trading
 - Any user type can generate orders that disrupt the market
 - ATSs require testing and supervision protocols and control mechanisms appropriately calibrated to the nature of the ATS
- SROs' controls, data and monitoring capabilities must scale to and adapt to the speed and volume of activity in today's markets
 - SRO capabilities have significantly evolved, and SROs continue to refine, improve and innovate in these areas
 - Federal regulators need to enhance data capture and technology

Oversight of ATS/HFT

- **Effective testing and supervisory protocols**
 - **Conformance testing and certification of connections by SRO for system specific controls and responses**
 - **Software development standards, testing, change management, re-certification**
 - **Real time monitoring of ATS system performance and metrics**
- **Messaging policies to promote efficient messaging practices without compromising liquidity**

Appropriate ATS/HFT Controls

- We agree with the prior recommendations to the Technology Advisory Committee regarding the need for effective risk controls at each level of the supply chain to protect the market from disruptions and mitigate the risk of a single point of failure. For example:

Trading Firm	Clearing Firm	Exchanges
Pre-Trade Quantity Limits	Certify Use of Pre-Trade Controls	Pre-Trade Quantity Limits
Pre-Trade Price Collars	Approve Pre-Trade Parameters	Pre-Trade Price Banding
Execution Throttles	Kill Button	Protection Points
Message Throttles	Credit Controls	Volatility Protections
Kill Button		Message Throttles
		Credit Controls
		Kill Button

- Pre-trade and post-trade controls and parameters reasonably designed to mitigate risks based on the nature of the business and the market.

Registration and Examination of Algorithms

- **Defining HFT requires static, arbitrary distinctions across different metrics (automation, latency, messaging and volume) and products**
 - **Regulators can easily distinguish highest volume, highest messaging participants in particular products over particular time frames**
 - **Data and tools allow regulators to identify participants and distinguish their activity according to relevant surveillance or analytical objectives**
 - **Regulators should focus on defining unacceptable conduct**

Registration and Examination of Algorithms

- **Should Algorithms Be Registered?**
 - Difficult to consistently define what constitutes a unique algorithm
 - Algorithms, inputs and parameters change frequently
 - Unclear why trading *strategies* should be registered simply because they are fully automated – activity in market is fully transparent
 - No empirical basis to support need for strategy registration
- **Should Algorithms Be Audited by SRO / Regulator?**
 - Enormous numbers of algorithms deployed – significant cost
 - Ineffective use of limited regulatory resources - unclear benefit
 - Entity developing the algorithm is responsible for testing
 - SROs establish and enforce appropriate market integrity rules

Supervision, Oversight and Analysis

- **Market abuse is not fundamentally a function of the means, speed or frequency of order entry and transactions – focus should be on specific behaviors that undermine market integrity irrespective of the means or pace of order entry, and on ensuring surveillance capabilities scale to the market infrastructure**
- **Automated trading poses certain risks that should not be taken lightly - appropriate risk/operational safeguards must be implemented that keep pace with advancements in technology in order to protect the orderly functioning of markets**

Supervision, Oversight and Analysis

- Comprehensive exchange and front-end audit trails
- Data available on real-time and historical basis
- Data supports effective surveillance for market abuse
- Data supports robust economic analysis
- Technology available to effectively mine and analyze data
- Continue to elevate diversity of regulatory skill sets
- Establish and enforce appropriate rules with regard to testing, supervision, controls, market abuse and fair access
- Technology will continue to evolve – traders, market centers and regulators will continue to innovate

Continuing Working Group Focus

- **Cross-market surveillance**
 - Competition, market structure changes, and blurring of lines across asset classes creates greater fragmentation
 - Requires appropriate coordination and information sharing among regulators to ensure comprehensive and effective surveillance
 - SROs can surveil activity in their own markets and can obtain information regarding activity in other markets from the market participant or trading venue when necessary, but do not have data to perform direct cross-market surveillance – role for federal regulators